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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
09/970,432	10/03/2001	Harold O. Treece	30545.11	4315				
27683	7590	09/19/2008						
HAYNES AND BOONE, LLP			EXAMINER					
901 Main Street			NOVOSAD, CHRISTOPHER J					
Suite 3100			ART UNIT	PAPER NUMBER				
Dallas, TX 75202			3641					
<table border="1"> <tr> <td>MAIL DATE</td> <td>DELIVERY MODE</td> </tr> <tr> <td>09/10/2008</td> <td>PAPER</td> </tr> </table>					MAIL DATE	DELIVERY MODE	09/10/2008	PAPER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/970,432	<b>Applicant(s)</b> TREECE, HAROLD O.
	<b>Examiner</b> Christopher J. Novosad	<b>Art Unit</b> 3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

#### Status

1) Responsive to communication(s) filed on 07 August 2008.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-5,7,8,10-12,14-41,43-51,90-108 and 142-147 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 8,10-12,14-18 and 90-108 is/are allowed.

6) Claim(s) 1-3,5,19-24,26,27,30-37,40,41,44-49,142-144 and 146 is/are rejected.

7) Claim(s) 4,7,25,28,29,38,39,43,50,51,145 and 147 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-548)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No./Mail Date 8/7/08

4) Interview Summary (PTO-413)  
Paper No./Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_

**DETAILED ACTION**

Claims 1-5, 7, 8, 10-12, 14-41, 43-51, 90-108 and 142-147 at present appear in this application.

Claims 6, 9, 13, 42, 52-89 and 109-141 have been canceled.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 30 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 3, there is no proper antecedent basis for the recitation of "said shoulder."

In claim 30, lines 4 and 5, there is no proper antecedent basis for the recitations of "said first disk" and "said second disk."

***Claim Rejections – 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section of this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 31-37, 40, 41, 142-144 and 146 are rejected under 35 U.S.C. 102(b) as being anticipated by LaFleur (USP 5,242,018).

With respect to claims 1, 31-33, 35, LaFleur discloses a cementing plug (*52, Fig. 3*) for use in cementing casing (*14*) in a well, comprising

a body member (*core member 64*) defining a central opening (*70*) therethrough;  
an elastomeric jacket (*member 66 of solid resilient foam material [col. 7, lines 43-47]*) disposed around said body member (*64*) and having a plurality of wiper cups (*74, and the member 63 with elastomeric coating 68 immediately above 74 which acts as a casing wiper [col. 4, lines 41-44]*) extending therefrom for engaging an inner surface of the casing (*14*);

an insert (*82*) disposed across said central opening (*70*) in said body member (*64*) for closure thereof, said insert (*82*) being one of a plurality (*col. 5, lines 3-14*) of interchangeable inserts and

wherein said insert (*82*) is a shearable member (*col. 5, lines 1 and 13*) adapted for shearing and opening said central opening (*70*) when a predetermined differential pressure (*col. 3, lines 63-67 and col. 4, line 64 to col. 5, line 3*) is applied across said shearable member (*82*) or a substantially non-shearable disk (*infrangible septum 72*) adapted for substantially permanent closure of said central opening (*70*).

Regarding claims 2, 36 and 143, the shearable member (*82*) is rupturable under hydraulic pressure, as disclosed in in LaFleur (*col. 5, line 1*).

With respect to claims 3, 34 and 144, the shearable member or insert (*82*) of LaFleur “is a substantially flat disk having a substantially uniform thickness,” as disclosed in Fig. 3 of LaFleur.

As to claims 5, 40 and 146, the body member (*64*) of LaFleur defines a shoulder (*76, Fig. 3*) in said central opening (*70*) on which said insert (*82*) is disposed.

Regarding claim 37, the shearable member (82) of LaFleur would necessarily involve selecting “one of a plurality of available thicknesses so that the shear pressure may be predetermined” as called for in this claim, in view of the clear teaching in LaFleur (*col. 4, line 67 to col. 5, line 3*) that “The removable septum 82 of the bottom plug 52 is selected to be frangible under the hydraulic pressure developed within a particular well by the column of cement that follows the bottom plug 52.”

With respect to claim 41, LaFleur (*col. 7, lines 43-48*) discloses that the jacket (66) is made of a “solid, resilient foam material … which preferably has good memory properties,” and therefore would be an “elastomeric material” as broadly recited in the claim.

Claims 19-24, 26, 27 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by LaFleur (USP 5,242,018).

With respect to claims 19 and 27, LaFleur discloses a cementing plug apparatus (*Figs. 1-3*) for use in cementing casing (*14*) in a well, said apparatus comprising:

A first cementing plug (*Figs. 1 and 3, at 52*) comprising:

A first body member (*64, Fig. 3*) defining a first central opening (*70, Fig. 3*) therethrough;

A first jacket (*66, Fig. 3*) disposed on said first body member (*64, Fig. 3*), said first jacket (*66, Fig. 3*) having a pair of wiper cups (*Fig. 3, at 74, and the member 63 with elastomeric coating 68 immediately above 74 which acts as a casing wiper [col. 4, lines 41-44]*) extending therefrom adapted for wiping engagement with an inner surface of the casing (*14*); and

A replaceable first insert (*82*) disposed adjacent to said first body member (*64*) for temporarily closing said first central opening (*70*) and subsequently shearing when subjected to a predetermined pressure, thereby opening said first central opening (*70*); and

A second cementing plug (*54 in Figs. 1 and 2*) comprising:

a second body member (64, *Fig. 2*) defining a second central opening (70, *Fig. 2*) therethrough; a second jacket (66, *Fig. 2*) disposed on said second body member (64, *Fig. 2*), said second jacket (66) having a pair of wiper cups (*Fig. 2, at 74, and the member 63 with elastomeric coating 68 immediately above 74 which acts as a casing wiper cup [col. 4, lines 41-44]*) extending therefrom adapted for wiping engagement with an inner surface of the casing (14), and a replaceable second insert (72, *Fig. 2*) disposed adjacent to said second body member (64, *Fig. 2*) for substantially permanently closing said second central opening (70, *Fig. 2*).

Regarding claim 20, in LaFleur (*Figs. 2 and 3*) the first and second body members (64, *Figs. 2 and 3, respectively*) and jackets (66, *Figs. 2 and 3, respectively*) are substantially identical, as called for in this claim.

With respect to claim 21, the second insert (72, *Fig. 2*) of LaFleur comprises “a substantially flat disk,” as broadly recited in the claim.

Regarding claim 22, the first and second inserts (72, 82) of LaFleur are interchangeable (*col. 5, lines 3-17*) as called for in the claim.

As to claim 23, the first insert (82, *Fig. 3*) in LaFleur would be necessarily be “a selected one of a plurality of inserts shearable at a corresponding plurality of predetermined pressures,” as called for in this claim, in view of the clear teaching in LaFleur (*col. 4, line 67 to col. 5, line 3*) that “The removable septum 82 of the bottom plug 52 is selected to be frangible under the hydraulic pressure developed within a particular well by the column of cement that follows the bottom plug 52.”

With respect to claim 24, the first insert (82, *Fig. 3*) of LaFleur comprises “a substantially flat disk” as recited in this claim.

Regarding claim 26, the first and second jackets (66, *Figs. 2 and 3*) of LaFleur are “made of an elastomeric material (*col. 7, lines 43-48 discloses that the jacket (66) is made of a “solid, resilient foam*

*material ... which preferably has good memory properties," and therefore would be an "elastomeric material" as broadly recited in the claim).*

With regard to claim 30, LaFleur (*Figs. 2 and 3*) shows the first and second body members (*64, Figs. 2 and 3, respectively*) having first and second shoulders (*76, Figs. 2 and 3, respectively*).

### **Claim Rejections – 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a)A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton *et al.* (USP 5,226,561), alone, hereinafter referred to as Hamilton.

With respect to claim 44, Hamilton discloses a plug (*Fig. 2*) comprising:

a body member (*62*) defining a central opening (*not numbered*) therethrough; and  
an insert (*38, Figs. 9, 10*) positioned for at least temporary closure of said central opening  
(unnumbered), wherein said insert (*38*) comprises:

an outer ring portion (*42*), and

an inner portion (*46,50*) extending from said outer ring portion, wherein said inner portion (*46, 50*) is  
thinner than said outer ring portion (*42*).

The recitation in the preamble of the claim of "for use in a well casing" merely defines  
the context in which the invention operates without further giving meaning to any of the

limitations recited in the body of the claim, and thus fails to materially or structurally limit the claim. See the following case law in this regard:

(A) Generally, the preamble does not limit the claims...the preamble may be limiting when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention.

Alien Eng'g Corp. v. Bartell Indus., Inc., v. Darragh Co., 63 USPQ2d 1769, 1774 (Fed. Cir. 2002).

(B) A statement of intended use or purpose usually will not limit the scope of the claim since such statements merely define the context in which the invention operates. However, preamble language may limit the claim if it recites not merely a context in which the invention may be used, but gives meaning to the limitations recited in the body of the claim.

DeGeorge v. Bernier, 226 USPQ 758, 761 n.3 (Fed. Cir. 1985).

(C) "If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the preamble should be construed as if in the balance of the claim." Pitney Bowes, Inc. v. Hewlett-Packard Co., 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999).

Moreover, claims 44 distinguishes over Hamilton in reciting that the "inner portion ... has a variable thickness," and dependent claim 48 further requires that "said inner portion has a first thickness at a center thereof and a second thickness at an outer portion thereof adjacent to said outer ring portion."

Fig. 10 of Hamilton shows the inner portion (*50, 46*) to be of uniform thickness. However, to have formed the inner portion (*50, 46*) so as to have "a variable thickness," as called for in claim 44, and wherein "said inner portion has a first thickness at a center thereof and a second thickness at an outer portion thereof adjacent to said outer ring portion," as in claim 48, would have merely represented obvious choices in engineering design to one of ordinary skill in the art at the time the invention was made for the purpose of producing the desired controlled

separation of the inner portion of the disk (*Figs. 11-17*) to minimize the number of disk fragments generated after piercing of the disk (*38*) by the projectile 82 (*col. 12, lines 16-18 and 43-57*).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the insert (*38*) of Hamilton, as noted in the paragraph above for the reason stated.

With respect to claim 45, note in Fig. 10 of Hamilton that the outer ring portion (*42*) and the inner portion (*50, 46*) are integrally formed, as required in the claim.

Regarding claim 46, Fig. 10 of Hamilton shows that the outer ring portion (*42*) and the inner portion (*46, 50*) form an internal corner (*unnumbered*), as called for in the claim.

Claim 47 further distinguishes over the insert (*38*) of Hamilton (*Fig. 10*) in reciting that the “internal corner” [*at the junction of the outer ring portion (42) and the inner portion (46, 50)*] is “radiused.” Again, to have made the internal corner of the insert (*38*) “radiused” would have merely represented an obvious choice in engineering design, and therefore would have been obvious to one of ordinary skill in the art at the time the invention was made for providing added reinforcement of said internal corner structure of the insert (*38*).

With respect to claim 49, note in Hamilton (Fig. 10) that the inner portion (*50*) is “an outwardly convex domed portion” as called for in the claim.

#### ***Allowable Subject Matter***

Claims 8, 10-12, 14-18, 90-108 are allowed.

Dependent claims 4, 7, 25, 28, 29, 38, 39, 43, 50, 51, 145 and 147 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Novosad whose telephone number is 571-272-6993. The examiner can normally be reached on Monday-Thursday 5:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached at 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher J. Novosad/  
Primary Examiner, Art Unit 3641

September 14, 2008